REMARKS

In the October 27, 2003 final Office Action the Examiner noted that claims 1, 2, 8-10, 16 and 17 were pending in the application and the Examiner rejected all claims. By this Preliminary Amendment, claims 1, 8, 9, 16 and 17 have been amended. Thus, claims 1, 2, 8-10, 17 and 17 remain pending in the application. The Examiner's rejections are traversed below.

The Rejection

In item 6 on pages 3-6 of the final Office Action the Examiner has rejected all claims as unpatentable over U.S. Patent 5,933,599 to Nolan in view of U.S. Patent 5,905,863 to Knowles et al. and further in view of U.S. Patent 5,845,084 to Bailey.

On page 3 of the Office Action the Examiner has acknowledged that Nolan fails to explicitly disclose determining for each document in the set, which of the documents is referenced, and extracting keywords contained in a body of a document forming part of each group of documents based on a statistical analysis, by referring to document group information. However, the Examiner relies on Knowles as teaching this feature.

The Knowles Reference

Applicants have reviewed the portions of Knowles referenced by the Examiner (column 1, line 63 to column 2, line 67; column 3, lines 20-64; and column 4, lines 34-50). The Knowles et al. patent is directed to a way of recognizing and manipulating threads contained in electronic messages. The Background of the Invention section of the Knowles patent describes typical electronic mail information, for example, identifying a relationship between a parent message and a reply message. Reference is also made to bulletin board systems in which replying to an e-mail message inserts structural information into the reply. The Background also discusses grouping of messages based on several criteria such as subject line, author, or recipient.

In the Summary of the Invention section of the Knowles patent, it is indicated that statistical information retrieval techniques are used in conjunction with textual material obtained by filtering messages to achieve a significant level of accuracy of identifying when one message is a reply to another. Column 4, lines 24-50 describe using the subject line, quoted text and unquoted text to determine whether a message is related to another message.

The Present Claimed Invention Patentably Distinguishes Over the Prior Art

Referring, for example, to claim 1, it is submitted that none of the prior art teaches or suggests:

> a document group keyword extraction device to extract keywords contained in a body of a document forming part of each group of documents based on a statistical analysis by referring to the document group information; and

> a document group keyword display device to display a title of each document in each group of documents together with the keywords extracted from the body of the document corresponding to the title by said document group keyword extraction device, the title being displayed in a title-displaying field and the keywords being displayed in a keyword-displaying field.

That is, none of the references teach the concept of extracting keywords contained in a body of a document and then displaying the keywords extracted from the body of the document in conjunction with a corresponding title, so that the title is displayed in a title-displaying field and the keywords are displayed in a keyword-displaying field. Figure 25 of the subject application illustrates an embodiment of the invention which clearly shows a title-displaying field and a keyword-displaying field. It is submitted that this clearly differs from the disclosures of the prior art. In particular, the cited Bailey reference is concerned with displaying both e-mail titles and corresponding e-mail bodies in one field.

In formulating the rejection the Examiner takes the position that the Knowles reference discloses statistical information type retrieval techniques. Applicants submit that these types of techniques are standard practice when selectively extracting words from a body of a document. However, applicants have never taken the position that use of statistical information techniques were unique to the applicants' invention. Instead, this feature was added to the claims in order to clarify the meaning of the term "keyword" within the claims. Specifically, this feature was inserted in order to make it clear that the Bailey reference had no disclosure related to

keywords.

In the rejection, the Examiner relies on the Knowles reference for disclosing statistical information retrieval techniques and relies on the Nolan reference for its disclosure of a display of a group of bulletin board documents. On pages 3 and 4 of the final Office Action the Examiner acknowledges that Nolan "fails to explicitly disclose extract keywords contained in the body of a document and display keywords extracted from the document corresponding to the title... the title and the keywords displayed in areas related to each other." However, the Examiner takes the position that "Bailey teaches a preview pane for displaying a message's extracted keywords along with the title of the message." Applicants disagree.

While Bailey describes displaying an e-mail message and subject (title) in a preview screen, Bailey is silent about displaying such a title together with keywords (i.e., words selected from the body of the text using a statistical analysis). Figure 3 in Bailey shows displaying in a mutually interrelated manner the subject (title of an e-mail message and the sender of the e-mail message) but does not teach displaying "keywords" as defined in the claims. On the continuation sheet attached to the February 23, 2004 Advisory Action the Examiner takes the position that "Bailey teaches the display of the entire body of an email message which contains keywords... such as the keywords in the body of email messages used by Knowles to correlate these messages..." Thus, the Examiner's argument appears to be that because Bailey teaches a display of all words, it inherently displays keywords. Applicants have amended the claims in an effort to clarify the differences between the present claimed invention and the prior art. Clearly, there is nothing in Bailey which teaches or suggests the display of keywords. Even more clearly, Bailey does not teach or suggest displaying the title in a title-displaying field and displaying keywords in a keyword-displaying field as set forth the claims as amended.

Applicants have reviewed column 2, lines 44-67 and Figure 3 of Bailey which were relied upon by the Examiner. Bailey teaches a standard highlight bar/ preview pane combination in which a highlighted message from a list is displayed in a preview pane. The preview pane discloses the entirety of the message; however, depending on the length of the message, the user may not see the entire message on the screen of the preview pane. Bailey does not have any discussion regarding extracting and displaying keywords (as defined in the claims) from the body of the message. On the continuation sheet attached to the February 23, 2004 Advisory Action the Examiner disagrees with this argument "because the extraction of key words for performing statistical analysis on such keywords, is taught by Knowles... As stated

above Bailey teaches the display of the body of e-mail messages, including all keywords, enclosed in such messages, and used by Knowles to perform the statistical analysis." The Examiner's statement makes it appear that the Knowles reference is part of the Bailey reference. It is not. It is further submitted that the Examiner's statement clearly acknowledges that Bailey does not disclose extraction and display of keywords.

Referring to the Examiner's reliance upon the Bailey patent, applicants submit that the preview pane disclosed in Bailey does not extract selected words by referring to document group information, but instead displays the entire message. While only a portion of the message may be displayed (depending on the length of the message, the size of the monitor, etc.), the entire message can be scrolled through in the preview pane. Therefore, all words in the message are displayed in Bailey and there is no extraction and displaying of keywords.

In summary, it is submitted that none of the references teach or suggest the features of claim 1, which include:

> a document group keyword extraction device to extract keywords
> contained in a body of a document forming part of each group of
> documents based on a statistical analysis by referring to the
> document group information; and

> a document group keyword display device to display a title of each
> document in each group of documents together with the keywords
> extracted from the body of the document corresponding to the
> title by said document group keyword extraction device, the title
> being displayed in a title-displaying field and the keywords being
> displayed in a keyword-displaying field.

Therefore, it is submitted that claim 1 patentably distinguishes over the prior art.

It appears that there may be some confusion about the differences between an e-mail message subject (its title) and the keywords found in the body of a document. Applicants submit that these two are clearly different as defined in the claim. Many e-mail messages (for instance, an e-mail message composed after many times of transmission in the return mail mode with a corresponding repeat "RE:" heading) have associated subject phrases which do not represent in any manner the contents of the messages. For such e-mail messages the subject phrases serve no value and clearly could not be considered "keywords" relevant to the

body of the message. Further, an e-mail subject is not extracted based on a statistical analysis and therefore cannot be seen to constitute the claimed keywords associated with the present invention. Therefore, it is submitted that an e-mail message subject (title) should not be equated with the claimed "keywords" set forth in the claims. On the continuation sheet attached to the Advisory Action mailed February 23, 2004, the Examiner disagreed with the applicants' analysis "because Bailey refers to the display of the entire body of an email message..." The Examiner also takes the position that Figure 3 of Bailey discloses "that what's being displayed in pane 54 is not a separate subject line, and body of the email message, but rather it is the display of a single cohesive e-mail body." However, the applicants' point is that the "RE" heading does not correspond to the claimed 'keywords'. In an effort to further emphasize the differences between the claimed invention and the prior art, the claims have been amended to specify that the title is displayed in a title-displaying field and the keywords are displayed in a keyword-displaying field. Therefore, it is submitted that claim 1 patentably distinguishes over the prior art.

Claim 2 depends from claim 1 and includes all of the features of that claim plus additional features which distinguish over the prior art. Therefore, it is submitted that claim 2 patentably distinguishes over the prior art.

Claim 8 is directed to a display apparatus which includes:

  a topic keyword extraction device to extract keywords contained in
  ' a body of each document relevant to each topic obtained by the
  further classification of each of the groups of documents based on
  a statistical analysis by referring to the document group
  information and the topic classification information;

  a topic keyword display device to display a title of each document
  relevant to each topic obtained by the further classification
  together with the keywords extracted from the body of each
  document corresponding to each title by said topic keyword
  extraction device, the title being displayed in a title-displaying
  field and the keywords being displayed in a keyword-displaying
  field.

Therefore, it is submitted that claims 8 patentably distinguishes over the prior art.

Claim 9, is directed to a display method which includes:

extracting keywords contained in a body of a document forming
part of each group of documents based on a statistical analysis by
referring to the document group information;

displaying a title of each document in each group of documents
together with the keywords extracted from the body of the
document corresponding to the title, the title being displayed in a
title-displaying field and the keywords being displayed in a
keyword-displaying field.

Therefore, it is submitted that claim 9 patentably distinguishes over the prior art.

Claim 10 depends from claim 9 and includes all of the features of that claim plus
additional features which are not taught or suggested by the prior art. Therefore, it is submitted
that claim 10 patentably distinguishes over the prior art.

Claim 16 is directed to a display method which includes:

extracting keywords contained in a body of each document
relevant to each topic obtained by the further classification of each
group of cross-referenced documents based on a statistical
analysis by referring to the document group information and the
topic classification information;

displaying a title of each document relevant to each topic obtained
by the further classification together with the keywords extracted
from the body of each document corresponding to each title, the
title being displayed in a title-displaying field and the keywords
being displayed in a keyword-displaying field.

Therefore, it is submitted that claim 16 patentably distinguishes over the prior art.

Claim 17 is directed to a computer readable storage medium which includes the
features of:

extracting keywords contained in a body of a document forming

part of each group of documents based on a statistical analysis by referring to the document group information;

displaying a title relevant to each group of documents together with the corresponding keywords extracted from the bodies of the group of documents, the title being displayed in a title-displaying field and the keywords being displayed in a keyword-displaying field.

Therefore, it is submitted that claim 17 patentably distinguishes over the prior art.
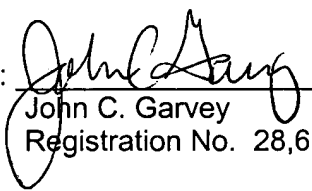
Summary

It is submitted that none of the references, either taken alone or in combination, teach the present claimed invention. Thus, claims 1, 2, 8-10, 16 and 17, are deemed to be in a condition suitable for allowance. Reconsideration of the claims and an early notice of allowance are earnestly solicited.

Respectfully submitted,

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